

The Remote Sensing Data Gateway

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The U.S. Environmental Protection Agency (U.S. EPA) Remote Sensing Data Gateway (RSDG) is a pilot project in the NERL to develop a comprehensive data search, acquisition, delivery, and archive mechanism for internal, national, and international sources of remote sensing data for the community of U.S. EPA scientists and trusted collaborators. The RSDG will be a high-speed, high-bandwidth enterprise server designed for the purpose of enabling U.S. EPA scientists to rapidly search and access global holdings of RS data. Through a series of unique collaborations with commercial remote sensing providers and state, federal and international government agencies, the RSDG will utilize comprehensive metadata search tools to rapidly define, research, locate, acquire, and deliver aerial photos, satellite imagery, spectra, atmospheric data, multi- and hyper-spectral, thermal infrared, radar, LIDAR (Light Detection And Ranging), microwave, and other forms of data that are acquired via the science of remote sensing. The RSDG will be directly linked to the metadata records of the major remote sensing data servers in the federal government and the global community of the Group on Earth Observation (GEO), as well as many commercial imagery vendors. The RSDG will directly access and provide remote sensing data from the holdings of the U.S. EPA's Remote Sensing Archive in Las Vegas, NV.

The RSDG is envisioned to provide enhanced acquisition services to a variety of imagery holdings and long-term archival storage of all U.S. EPA remote sensing information in accordance with the National Digital Information Infrastructure and Preservation Program.

Deployment of the RSDG will occur in three phases. The first phase will be the development of the comprehensive metadata search and imagery acquisition and delivery process. The second phase will enable all U.S. EPA imagery holdings to be served to real-time applications, such as Windows To My Environment and desktop Geographic Information Systems (GIS) applications. The third phase will enable the use of advanced scientific tools for the analysis and utilization of RS data, such as visualization techniques.

This poster presentation includes a demonstration of the RSDG on a laptop computer that allows users to see its operation and benefits.

Although this work was reviewed by the U.S. EPA and approved for publication, it may not necessarily reflect official Agency policy.

